REMARKS

Claims 1-56 have been examined, and all claims remain rejected based on prior art.

Applicant thanks the Examiner for the telephonic interview conducted on December 20, 2004. The substance of this interview is reflected in the remarks below.

Claims 15, 19, 20, 23, 26-29, 32, 35, and 36 remain rejected under 35 U.S.C. § 102(b) as being anticipated by Durrant et al. (U.S. Patent No. 5,659,574). Claims 1, 39, and 54 remain rejected under 35 U.S.C. § 102(e) as being anticipated by Zhou et al. (U.S. Patent No. 6,370,130). Claims 16-18, 21, 22, 30, 33, 34, 37, 38, and 47 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Durrant. Claims 8, 55, and 56 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhou. Claims 2-6, 40-46, and 51-53 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhou in view of Agrawal et al. (U.S. Patent No. 6,363,108). Claims 48-50 are newly rejected under 35 U.S.C. § 103(a) as being unpatentable over Durran in view of Zhou and Agrawal et al. Claims 24 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Durrant in view of Zhou. Claims 7 and 9-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhou in view of Agrawal, as applied to claim 6, and further in view of Durrant. Applicant respectfully traverses these rejections for the reasons set forth below.

Claims 15-22, 32-38, and 47-50:

Claims 15 and 32 each recite a despreader having at least one accumulate and dump circuit with an enable input that selectively dumps an accumulated sample after a variable observation period has been satisfied. Similarly, claim 47 recites a method of configurably despreading a spread spectrum signal, that includes receiving a control signal at an accumulate and dump circuit that indicates a desired variable observation length, and dumping an accumulated sample from the accumulate and dump circuit after the desired variable observation length has been satisfied. By providing variable observation lengths, noise interference and signal impairment in despreading operations are overcome. In particular, the present invention provides a despreader that can adapt to variations in the noise level of a signal under different operating environments.

As asserted in the previous Response, Durrant does not teach (or even suggest) despreading by selectively dumping an accumulated sample after a variable observation period has been satisfied, as required by each of claims 15, 32, and 47. Durrant's dump signal clears the accumulation at the end of each symbol period, which is not variable. See, for example, col. 24, lines 57-58.

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In the final Office Action the Examiner directs Applicant to Durrant, col. 8, lines 65-67, which states that "Each code symbol may be, for example, 32 chips in length, or some other appropriate number of chips in length (preferably an even number of chips)." While Durrant may teach that the code symbol is not required to be any particular number of chips in length, Durrant does not teach that the code symbol length varies during operation. Thus, claims 15, 32, and 47 are patentable over Durrant for at least this reason.

Claims 16-22 depend from claim 15, and claims 33-38 depend from claim 32. Thus claims 16-22 and 33-38 are patentable over Durrant for at least the same reasons as claims 15 and 32.

Claims 48-50 depend from claim 47. Durrant has been applied against claim 47, Zhou and Agrawal has been further applied against claims 48-50. Zhou and Agrawal fail to make up for the deficiencies of Durrant, and thus claims 48-50 are patentable for at least the same reasons as claim 47.

The Examiner admitted during the telephone interview that Durrant "probably does not teach" the claimed variable observation period. Unless the Examiner can identify prior art that teaches or suggests this feature, he must not only withdraw this prior art rejection, but also allow these claims.

Claims 23-31:

Claim 23 recites a despreader having at least one multiplier coupled to a code input line and selectively coupled to a plurality of data input lines in a manner to satisfy any one of multiple despreading protocols. This selectivity is shown in Fig. 2B where Mux A 278 and Mux B 280

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receive a configuration instruction 112a and 112b, respectively, that indicates whether I-sample input 236a or Q-sample input 236b will be communicated to multiplier 272 and 273, respectively. In this manner, the multimode despreader provides all needed permutations of code and data mixing for a communication system. By having selective couplers (i.e., multipliers) in a multimode despreader, there is no need to duplicate common elements used across multiple varied despreading protocols for varied wireless applications and to future generations of despreading protocols. Rather, the invention solves these limitations with an efficient quantity of computing resources and with an adequate amount of reconfigurability, e.g., as appropriate for the class of despreading and dechannelization functions.

As asserted in the previous Response, Durrant does not teach (or even suggest) a despreader having at least one multiplier coupled to a code input line and selectively coupled to a plurality of data input lines in a manner to satisfy any one of multiple despreading protocols, as required by claim 23. The multipliers 1171-174 (see Fig. 15B), for example, merely multiply signals applied thereto, and do not have any selectivity. Thus, claim 23 is patentable over Durrant for at least this reason.

Claims 26-31 depend from claim 23, and thus these claims are patentable over the applied references for at least the same reasons as claim 23.

Claims 24-25, which also depend from claim 23, have Zhou in addition to Durrant applied against them. Zhou fails to make up for the deficiencies of Durrant, and thus these claims are patentable over the applied references by virtue of their dependence on claim 23.

In the final Office Action the Examiner has not responded to Applicant's assertions with respect to claims 23-31. The Examiner also did not provide a response during the interview because he said he did not have time to review Durrant. Applicant therefore maintains these assertions from the previous Response, and requests the Examiner to at least respond to Applicant's assertions, and preferably to withdraw these prior art rejections.

Claims 1-14, 39-46, and 51-56:

Claim 1 recites a configurable despreader that has a selective coupler that selectively couples one of a plurality of data lines with a multiplier per any one of a plurality of despreading protocols. Similarly, claim 39 recites selectively communicating a desired input data type to a multiplier via a selective coupler, the desired input data type selected from a plurality of input data types per a desired despreading protocol. This feature provides a solution to conventional limitations of forward and backward compatibility associated with new generations of despreading and channelization protocols within any of the varied wireless applications.

As asserted in the previous Response, Zhou does not teach or suggest a configurable despreader that has a selective coupler that selectively couples one of a plurality of data lines with a multiplier per any one of a plurality of despreading protocols, as required by claim 1, or selectively communicating a desired input data type to a multiplier via a selective coupler, the desired input data type selected from a plurality of input data types per a desired despreading protocol, as required by claim 39. Zhou relates only to a single despreading protocol. Thus, claims 1 and 39 are patentable over the applied references for at least these reasons.

Claims 2-6, 8, and 54-56 depend from claim 1, and claims 40-46 and 51-53 depend from claim 39. Many of these claims have Agawal, in addition to Zhou, applied against them. Agawal fails to make up for the deficiencies of Zhou and, and thus these claims are patentable over the applied references by virtue of their dependence on claims 1 or 39.

Claims 7 and 9-14, which also depend from claim 1, also have Durrant in addition to Zhou and Agrawal applied against them. Durrant fails to make up for the deficiencies of Zhou and Agrawal, and thus these claims are patentable over the applied references by virtue of their dependence on claim 1.

The Examiner responds to Applicant's assertions by stating that "applicants have argued 'Zhou does not teach ... single dispreading [sic] protocol.' However, Zhou implies such a teaching in col. 1, lines 57-60." With this statement the Examiner appears to be agreeing with Applicant's

assertions. That is, Applicant asserts that Zhou teaches a single protocol, and the Examiner responds by asserting that Zhou implies a single despreading protocol. If the Examiner agrees with Applicant's assertions, then the Examiner should withdraw this rejection. Also, during the interview the Examiner stated that claims 1 and 39 (and thus necessarily each of their dependent claims) are "probably allowable." Reconsideration and withdrawal of this rejection is therefore respectfully requested.

In view of the above amendment, Applicant believes the pending application is in condition for allowance. Should the Examiner find this application to not be on condition for allowance, as agreed to by the Examiner during the interview, the Examiner is respectfully requested to call the undersigned to conduct another telephone interview.

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Respectfully, submitted,

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